FROM THE STONE TO THE INTERNET

Arts & Languages

~ StandFor Projects

Teacher Notes

Arts & Languages	History & Humanities	Science
Baroque	Education in Athens	A-maize-ing corn
Cave paintings	Life in a medieval castle	Biofuels
Cinema: the seventh art	Napoleon Bonaparte	Cleaning up the oceans
Components of a comic book	Rise and fall of the Berlin Wall	How much water do you use a day?
Dance	Scribes in Ancient Egypt	How they communicate
Egyptian hieroglyphs	The *Belle Epoque* and the Armed Peace	Hurricanes
From the stone to the Internet	The city of the gods	Nuclear contamination
How does a newsroom work?	The first universities	Petroleum
How to become cultured?	The Great Pyramid of Giza	Preventing droughts
National Library	The Macedonian Empire	Star maps
Renaissance Florence	The medieval table	The El Niño phenomenon
The cultural leap	Who are the major Greek gods and goddesses?	The legacy of an idea
		The origins of earthquakes
		The ozone layer
		The senses
		Uses of water

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#EXPLORING THE TOPIC

[illegible]

1 Look at the title of the infographic you're about to read and then write down the first words and sentences that come to mind. Don't think about it too much!

[illegible] **communication** [illegible] **cars**. [illegible]

2 Before skimming the text to identify the main ideas in the infographic, complete the first and second lines in the K-W-L chart.

[illegible]

3 Remember: throughout the unit, you can review your K-W-L chart by adding what you learn to column 3: "I learned."

[illegible]

4 Find in the word search puzzle:

a) six cognate words system, communication, invention, millions, prices, technology

b) one false cognate data

c) three time words (past, present and future) prehistory, today, future

d) five means of communication radio, satellite, telegraph, telephone, television

Y	Y	T	E	Q	S	Y	S	T	E	M	O	S	S	E	I
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I	R	I	T	J	E	L	N	N	O	U	M	C	E	T	N
U	X	L	D	S	I	P	O	L	D	H	O	I	L	U	O
I	R	L	D	O	I	I	H	P	A	M	Q	F	L	F	I
N	Q	I	N	D	A	T	A	O	Y	V	Y	E	I	P	S
V	I	O	P	N	L	I	E	U	N	Z	R	O	T	G	I
E	G	N	E	Y	T	E	L	E	P	H	O	N	E	N	V
N	B	S	A	Q	M	I	Z	E	P	W	H	I	B	P	E
T	E	D	T	W	C	T	E	B	A	H	P	L	A	H	L
I	C	D	V	A	Y	G	O	L	O	N	H	C	E	T	E
O	I	D	T	E	L	E	G	R	A	P	H	P	M	D	T
N	L	I	A	B	E	G	W	U	O	N	C	M	M	T	L
E	O	L	X	T	D	W	C	G	P	R	A	D	I	O	I
Z	P	R	E	H	I	S	T	O	R	Y	L	N	X	S	E

Skimming is a strategy for getting better comprehension by looking for the main ideas and key words in a text. When skimming, you don't read every word.

Who What When Where Why Weather/Sustainability

My glossary

Help students complete the **My glossary** box with new or difficult words taken from the infographic. Form small groups and ask each one to discuss the meaning of the selected words and then write sentences using these words. You can make the pre-reading more fun by playing Tic-Tac-Toe. Find out the most frequently used words by students in the previous activities, and write them on the board. Draw a grid on the board and start the game by asking each group the meaning of one of the words. When a group answers correctly, it can choose a square to mark a cross or a naught. If the answer is wrong, another group can answer. Repeat until one group wins the game or the spaces on the grid are full. In this case, there's no winner.

K-W-L chart

know about this topic

want to know

learned

TIMELINE

From the stone to the Internet

The development of communication began slowly

Mankind took a while to evolve its means of communication. Before the invention of writing, we spent millions of years using just gestures and sounds. Even speech developed gradually: it began to emerge when cave paintings already existed.

On the other hand, everything began to get faster. We could exchange knowledge through conversation, especially on mythological and religious topics. Writing soon appeared as a way to record sounds. In the 8th century B.C., the Greek poems *The Iliad* and *The Odyssey* were written from stories passed down orally.

After written language, we began using technology to communicate. In less than a lifetime we've learned how to broadcast a message to millions of people through radio and television. Combined with home phones, cell phones and the Internet, we have a bright future.
Fred Linardi

© 1

2900 B.C.
FLYING AT HIGH SPEED

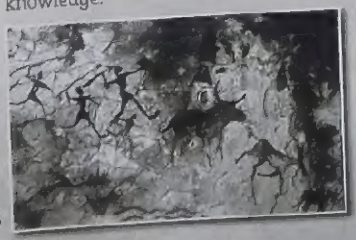
One enduring form of sending information came into use: messages delivered by **carrier pigeons**. Their oldest recorded use dates from Egyptian Pharaoh Ramses II, but up until 2002 these birds were still used by Indian police.

EVOLUTION OVER WRITING
After the alphabet, everything got faster

© 3

3800 B.C.
CAVE DRAWINGS

While people back then didn't know how to speak the way we do today, they could make **cave drawings** using pigments of clay, hematite, and charcoal. The purpose of the paintings isn't clear, but certainly they shared knowledge.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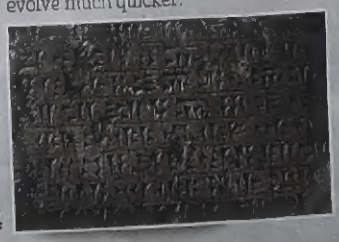
3200 B.C.
FIRST LETTERS

The Sumerians created **graphic representations** using figures that represented objects from their daily life. With the systematization of this type of drawing, the Phoenicians also developed writing. Prehistory was over, and communication began to evolve much quicker.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3000 B.C.
FIRE TELEGRAPH

The smoke signal arrived as a way of long-distance communication. First used by **North American natives**, this method laid the groundwork for the telegraph: a blanket was used to produce puffs of smoke which were released in regular sets.

© 8

© 9

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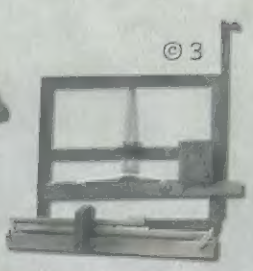
550 B.C.
LETTERS AT A GALLOP

Our modern mail system began with King Cyrus II of Persia, who developed a system of relay stations for riders to carry the mail on horseback. This system allowed a letter to safely travel up to 2,500 kilometers.

1455
MASS PRODUCTION OF PRINTED BOOKS

To increase access to information by automatically duplicating a page of text, Johannes Gutenberg invented the **printing press**. The idea had been used by the Chinese fourteen centuries earlier, but Gutenberg improved the system by using separate letters.

© 2



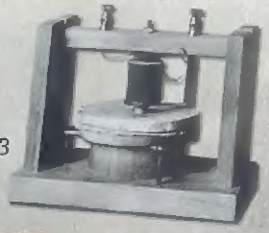
© 3

1837
STRAIGHTAWAY CONTACTS

In 1844, American Samuel Morse (1791-1872) introduced the **telegraph** as a way to exchange messages over long distances. A few years earlier he had invented Morse Code, which would become a standard communication tool for navigation and aviation.

1876
I'M ALL EARS

Scottish inventor Alexander Graham Bell (1847-1922) was credited with patenting his **telephone** in the United States. Some sources credit the Italian Antonio Meucci (1808-1889) for *developing his prototype earlier, but it was Bell who popularized it.*



© 3

© 6

1893
RADIO WAVES

Radio was introduced by Italian inventor **Guglielmo Marconi** (1874-1937). Croatian Nikola Tesla (1856-1943) would later gain credit as Marconi's invention had used nineteen of Tesla's patents. The first equipment transmitted Morse Code. Voice transmission would begin only in 1918.

1929
IMAGES IN THE ROOM

Russian scientist **Vladimir Zworykin** *(1889-1982) showed off the iconoscope, the precursor to the television. Several subsequent developments of Zworykin's invention would lead to the industrialization and spreading of TV, whose progress accelerated after 1945.*

© 9

1960
SPECIAL BALLOON

Launched by the United States, **the first communications satellite** reflected signs sent from Earth. Named Echo I, it was a giant balloon stretching 30 meters across that could be seen from the ground with the naked eye.

© 7

1994
EVERYBODY IS ONLINE

The Internet began in the 1950s as a computer communications system used primarily by the American military. Public Internet access began in 1989, and the **World Wide Web** medium was introduced a year later. By 1995 the Internet had 16 million users, rising to about three billion today.

© Marcoleza/Abril Comunicações S/A

#GUIDED READING

1. The infographic is about the history of oral and written communication development. There is a timeline to illustrate the improvements in the ways humans communicate, which shows that development began slowly but sped up significantly after the invention of the alphabet.
Teachers can suggest that students think about the time that passed from the first written records to the beginning of the mass production of books, and from books to the beginning of the Internet, to help them realize how one process was slower and the other faster.

1 The title

Start reading by the title of the infographic; observe that it is possible to infer the subject to be discussed by doing it.

- What subject is it about?

2 Speech and writing

The development of spoken language and its transition to written language came through the use of signs that correspond to the sound of our voice.

- Which invention significantly sped up human communication techniques?

2. The infographic shows that thousands of years ago, people were looking for the means to communicate through language, and that the invention of writing allowed them to share knowledge and culture from generation to generation by combining sounds, lines, syllables, words, phrases and texts, using language in its best possible way.

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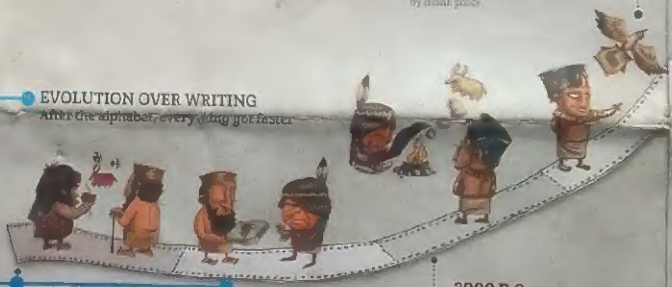

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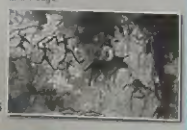

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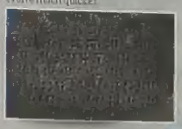

3000 B.C.
FIRE TELEGRAPH

The smoke signal served as a way of long-distance communication. First used by **North American natives**, this method laid the groundwork for the telegraph: a blanket was used to produce puffs of smoke which were released in regular sets.

3 Dotted line

To connect the texts to the images and their relation to the timeline illustration, this infographic uses dotted lines. These lines conduct the sequential reading of the information, helping give the timeline a sensation of movement and evolution.

- Which other item is commonly used for the same purpose?
- In your opinion, why did this infographic choose these dotted lines?

3. In general, arrows are used to point to the relation between the texts and their corresponding images.
Students are expected to understand that the dotted lines are lighter for the infographic, making the relation between the texts and images look subtle and delicate. If arrows had been used instead of dotted lines, the layout would have looked quite heavy.

4 The history

The Sumerians created a complete system of writing which used clay tablets with pictographic symbols.

- What is the importance of written records to human history?

4. Think about how spoken language and writing are fundamental to human history and how this must take into consideration that language must be recorded. The infographic demonstrates some of the many ways that humans discovered for sending messages, and that the language in which these messages are transmitted depends on widespread acceptance.

5 Credits

Photography credits are mandatory in all publications, under copyright law. For this infographic, a symbol and a number were chosen, as a code to identify the owner of each image.

- Which symbol is this?
- Do you know what it means?
- Why was this information given this way?

5. The symbol © (a circled capital letter c) represents "copyright" (of copy or private property) worldwide. Explain that this symbol was included recently to keyboards and computer systems.
The infographic creator probably chose the symbol and number beside each image in order not to repeat this information on the photographs one by one. Tell students that as well as the photos, the illustrator was credited (in this case, Marcelleza) for the art that flows horizontally along the infographic.

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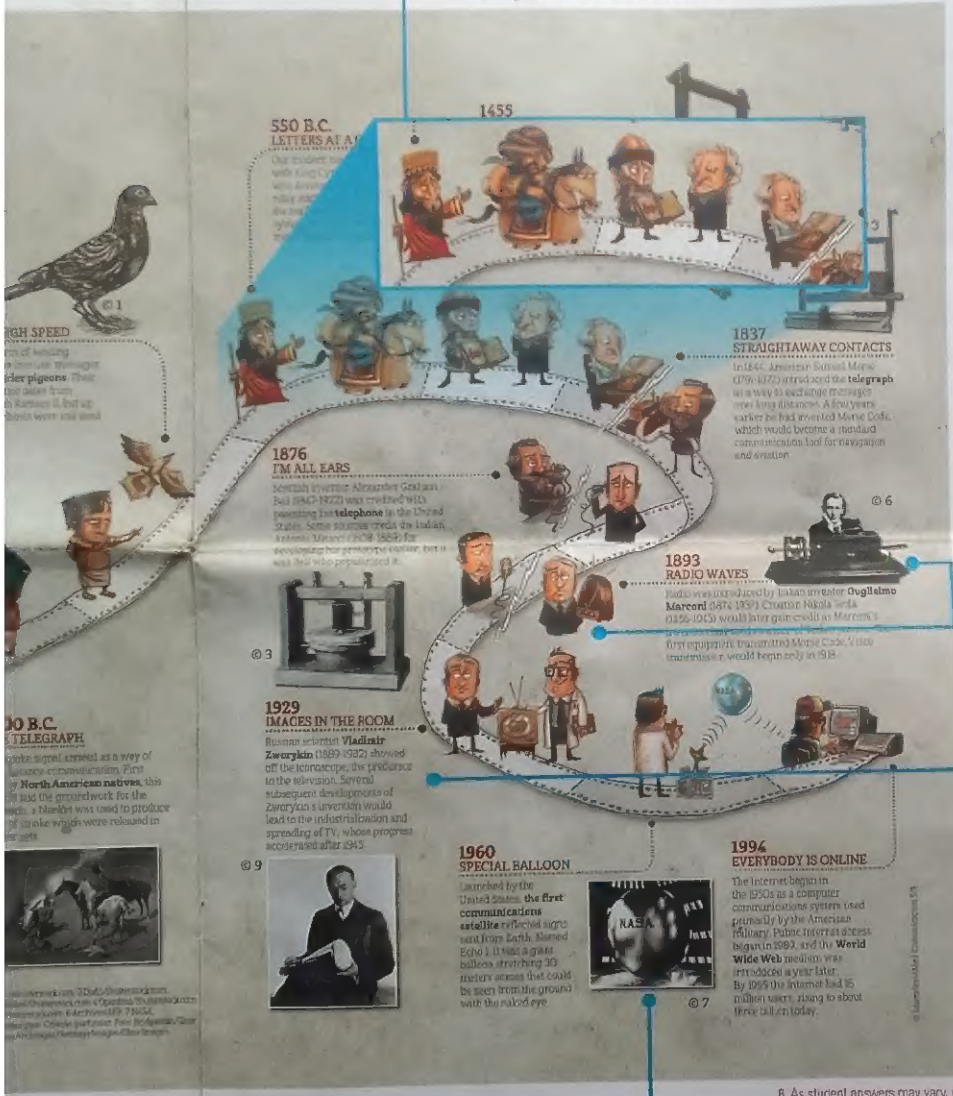
6 The art

The timeline is a common technique used in infographics because it is informative and visual. It works as an option for the narrative seeing as it organizes the events chronologically. Pay close attention to the illustration of the timeline, and focus on the characters and references. This illustration presents an important reference about communication.

- Can you tell what this is?

6. The timeline illustration is designed like a page rolling out of a printer. It was designed as a metaphor for the communication technologies we have developed. The illustrations are organized to give the idea of interaction between the characters, just like in a cartoon.

7. Tell students that this hybrid iconography visually presents what the text is designed to explain. It goes beyond an illustrative purpose, as it contains a large portion of the content itself, giving readers easier access to the information.



7 Hybrid iconography

The texts and images (photos, illustrations, maps, diagrams, and others) used in the infographic combine to make an integrated set of information which brings sense to a story or explanation. Because of this, the style of the illustration must be appropriate for the issues and subjects covered in the infographic. Note that the timeline was designed in an unusual way: the photos rotate around the main illustration, creating an organic and dynamic grouping. This hybrid iconography with short texts is an efficient means to register specific types of information.

8 Varieties

The infographic shows that verbal communication increased greatly due to television. Whether speaking in public or via electronic means, it is essential to choose the right words, and to study and predict the effects that you want to convey, given that language varies according to the communication situation (formal or informal).

- Give examples of verbal communication in which formal and informal situations are required.

8. As student answers may vary, use this opportunity to discuss the fact that formal language is generally used in specific situations, such as applying for a job or in business communication. Informal language, on the other hand, is used when talking to friends and family. Explain that for proper, effective communication between speakers, the people who are communicating must manage to adapt the language to their specific kind of communication situation.

9 The images

The purpose of the images in the infographic is not to "decorate" the page. In fact, they have the same purpose as the text: to inform and help with comprehension. Readers must try to understand the meaning of the images in the infographic context.

9. The images presented are rich in information and help illustrate the content, which may pique students' interest for additional knowledge. You can explain, for example, that some of the space probes launched by NASA, such as Pioneer 10 and 11 and Voyager 1 and 2, contain human language records, as well as movies and songs, in the event that if one day they are found by an extraterrestrial civilization those beings could learn about the probes' creators. This information may be useful, for example, in a discussion on how these messages might be read by other civilizations.

10 Conclusion...

10. Teachers should accept students answers as long as they relate to the question.

You've noticed that to understand and write texts, during the school cycles, it is necessary to think of the format and content.

- In your opinion, which objects and tools created and used by man have been the most useful for the development of communication between people?

#POST-READING

We have learned how human communication has developed – from the stone to the Internet. When we think about the Internet, for example, sometimes we have problems in communicating by using cell phones: there is no signal or the wi-fi network is too slow.

Sergey Nivens/Shutterstock.com

1 How about the communication tools invented before the Internet or radio and television? What were the possible problems people might have had when using these tools? Can you spot these situations? Work in pairs to discuss. Then write your suggestions.

What kind of problems these communication methods would have:

a) cave drawings? Personal answer.

b) telegraph? Personal answer.

c) sumerian writing? Personal answer.

d) carrier pigeons? Personal answer.

e) letters on horseback? Personal answer.

Fotapov Alexandre/Shutterstock.com

Form students into pairs and ask them to read the infographic on communication tools once more. The goal is to make them think about the conditions and problems of each period when these communication tools were used. Give them some time to think and make comments. However, emphasize that it must have been possible for the problems to have occurred.

2 Now, can you think of a possible solution for each problem? Write down your answers.

a) cave drawings Personal answer.

b) telegraph Personal answer.

c) sumerian writing Personal answer.

d) carrier pigeons Personal answer.

e) letters on horseback Personal answer.

Learner log

After discussing the possible problems, help students think of some possible solutions people might have had for these problems. Ask students to give plausible solutions. Organize them in a circle so they can share their ideas with the entire class. If time allows, ask students to present their ideas visually, perhaps with a poster. Tell them to choose one communication tool and "sell" their ideas to solve the communication problem. Finish the activity by letting them vote for the best solution. As a post-reading activity, make students think about how they reached their conclusions. Try the "food for thought" activity. Explain the meaning of "food for thought" (an English expression for a moment of reflection, something to think about). Tell students to point out the clues in the infographic that led them to their conclusions.

3 Use the information given to write the name of a communication tool. Don't cheat! Just use your memory to answer the questions!

a) Created for military purposes in the mid-20th century.

Suggested answer: The Internet.

b) One person created the prototype, but someone else popularized it.

Suggested answer: The telephone.

c) This important code was used for navigation and aviation.

Suggested answer: Morse code.

d) The Chinese were the first to use it.

Suggested answer: Printing.

e) The ancient Persians used it. In fact, they created it.

Suggested answer: The mail (letters on horseback).

f) Fire! Fire!

Suggested answer: Smoke signals.

Use this activity – Word play – to challenge students to remember some communication tools. Give them time to write down the names of the communication tools (for example, 60 seconds). The winner is the student who remembers the words correctly.

The goal is to help students produce a text, oral or written, they can use in a real communicative situation. Explain that they must report the communication problems in this lesson. Select no what they found in their research.

#RESEARCH TIME

Think about this expression:

> **Who doesn't communicate, gets into trouble!"**
> - Chacrinha, TV host (1917-1988)

Chacrinha was a famous TV host in Brazil during the 1970s and 1980s. Not only did he wear funny and colorful clothes, but he also had a lot of famous expressions.

What does this expression mean to you?

Personal answer

Start a discussion about misunderstandings. Tell students that sometimes we say something that other people understand differently. The big question is: Why does this happen? Give them time to write their notes. Tell them to present their ideas to the class.

Anatoharnia/Shutterstock.com

Communication implies transmitting messages. It seems simple, right? So, think about it: why does miscommunication happen? What are the elements in the communication processes that lead to misunderstandings? To understand this, you must first identify and study these elements.

In order to understand what makes communication effective, we need to understand some issues. In groups, answer the questions below. Then, share your findings with the teacher and your classmates.

1. What are the three key components of communication? Sender, receiver and message
2. Other sources mention that along with these three key components, there are other elements essential for communication. What are they? Suggested answers: encoding, communication channel, decoding and feedback
3. There are two basic types of communication: verbal and nonverbal. Can you find examples of each? Suggested answer: Nonverbal – eye contact, body language, facial expressions. Verbal – communication by means of words and writing (face-to-face conversations, e-mails)
4. What are the barriers to communication? Give some examples. Suggested answer: speaking in codes, emotions, control, time. For this topic, students will research some basic aspects of communication. They should do this research in class, using the Internet. If there is no computer lab available in the school, bring some texts or materials downloaded from the Internet so that the students can find the answers.

#IT'S YOUR TURN

Now that you have learned about the means of communication and how miscommunication occurs, it's time to go back in time and jump into your memories... in this case, the embarrassing ones. Are you ready?

Dooder/Shutterstock.com

This is your task:

- use the movie camera on your cell phone to recreate a situation where a miscommunication occurred;
- identify the communication problems in this situation, based on your study of communication elements.

Explain to students that they must decide on roles in the group. However, it doesn't mean that they can't help each other. For the scriptwriter, this student is in charge of organizing the group's ideas, not to write it by him/herself. Tell them they cannot create any scenarios.

How to do it?

- In groups of four, choose a miscommunication situation.
- After choosing, decide on how to organize the tasks in the group: scriptwriter/director, camera operator, and the actors/actresses.
- The film must not be more than 3 minutes long.
- When your presentation is finished, tell your teacher and classmates the communication problems you have identified in the situation that you and your group recorded in the video.

Give students the deadline for the presentation. If there is a projector and a computer in the classroom, tell them the videos will be presented in class or in the computer lab. Stress the importance of presenting it on the day you set. Also, think about how you are going to evaluate the students. You can also ask them to hand in the written version of the script as part of their grade.

Project schedule

Who
What
When